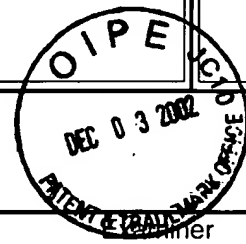


#9

TRANSMITTAL OF FORMAL DRAWINGS

Docket No. *NUMB*
PO9-99-014 *12-3-02*



In Re Application Of: M. Baskey et al.

Serial No.	Filing Date	Confirmation No.	Examiner	Art Unit
09/253,250	February 19, 1999	5382	Gregory G. Todd	2157

Invention: **AN APPARATUS FOR PROVIDING DIRECT DATA PROCESSING ACCESS USING A QUEUED DIRECT INPUT-OUTPUT DEVICE**

Address to:
Assistant Commissioner for Patents
Washington, D.C. 20231

Transmitted herewith are:

8 sheets of formal drawing(s) for this application.

☒ Each sheet of drawing indicates the identifying indicia suggested in 37 CFR Section 1.84(c).

Floyd A. Gonzalez
Signature

Floyd A. Gonzalez, Reg. 26,732
IBM Corporation
Intellectual Property Law
2455 South Road, P386
Poughkeepsie, New York 12601
845-433-1163
Fax: 845-432-9786

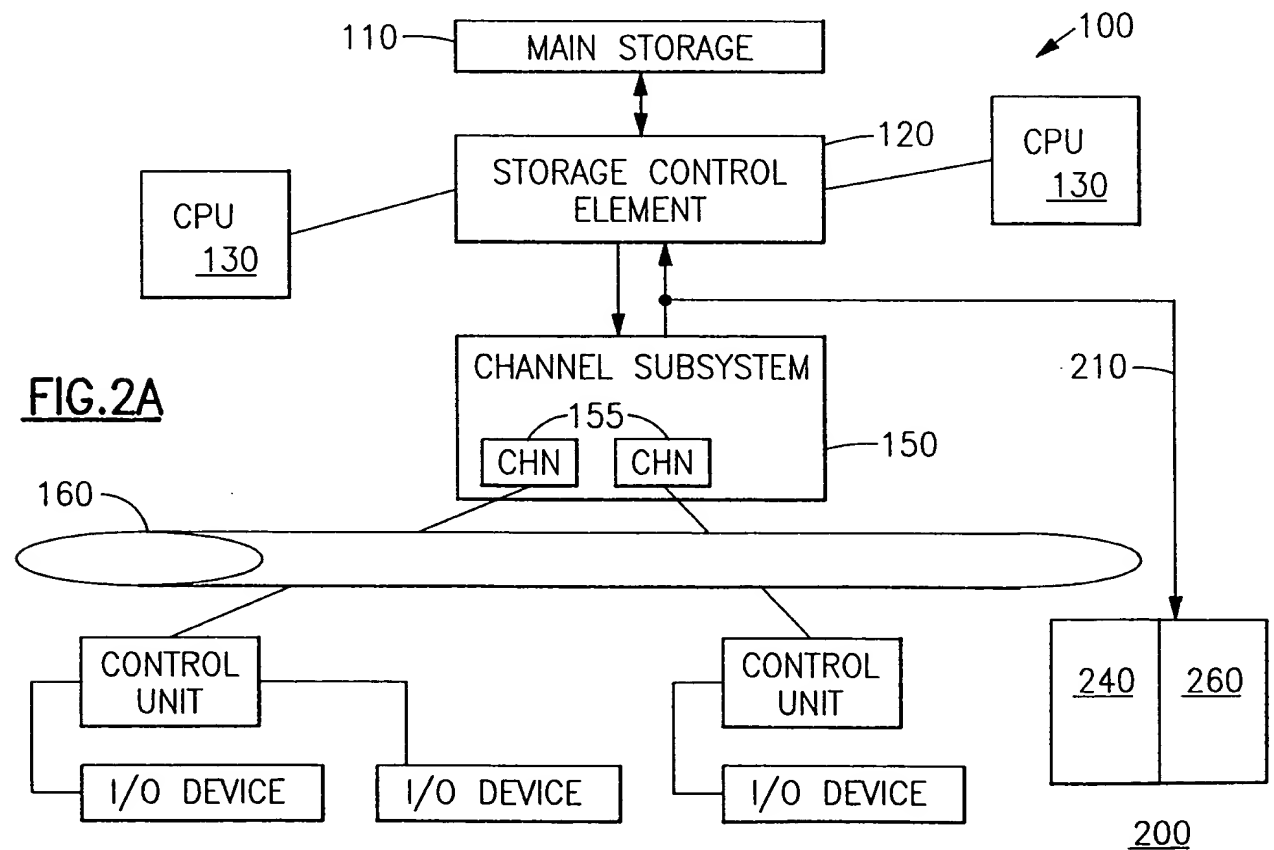
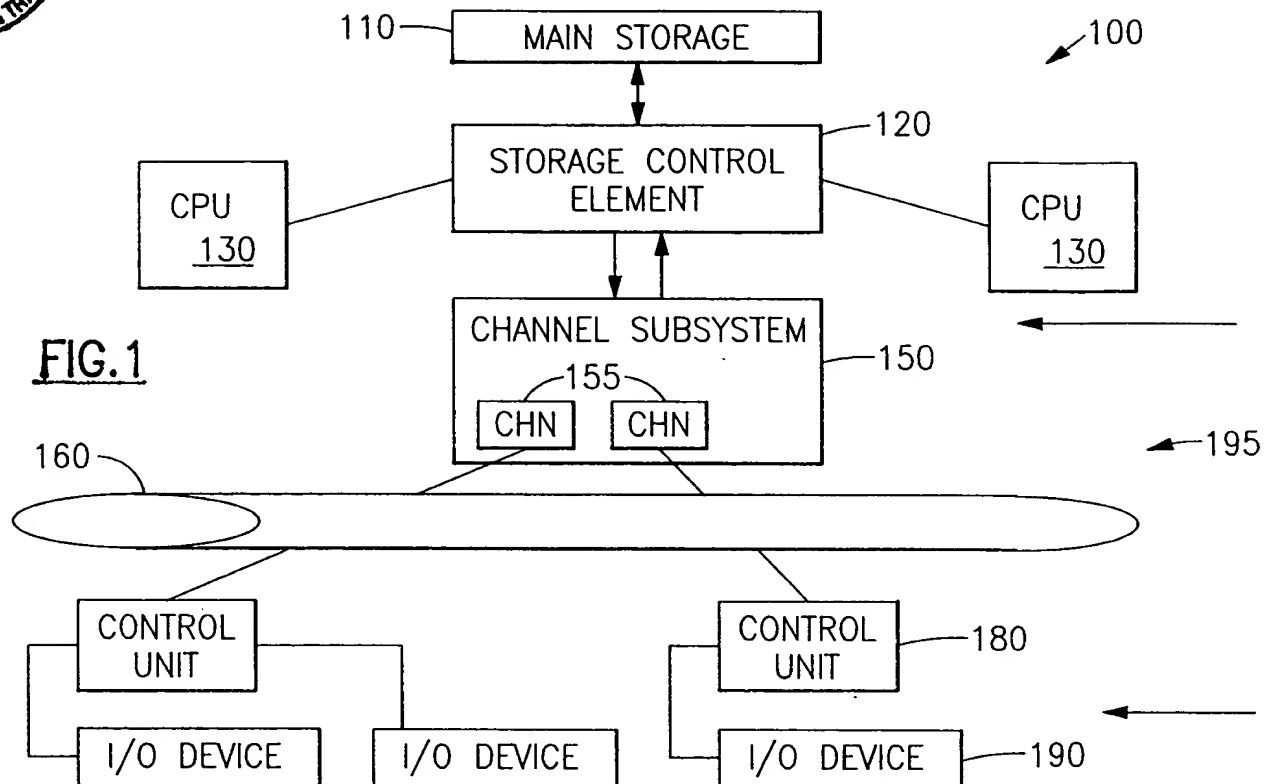
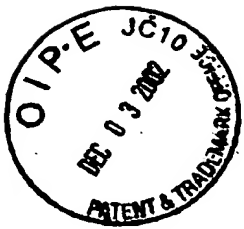
Dated: November 25, 2002

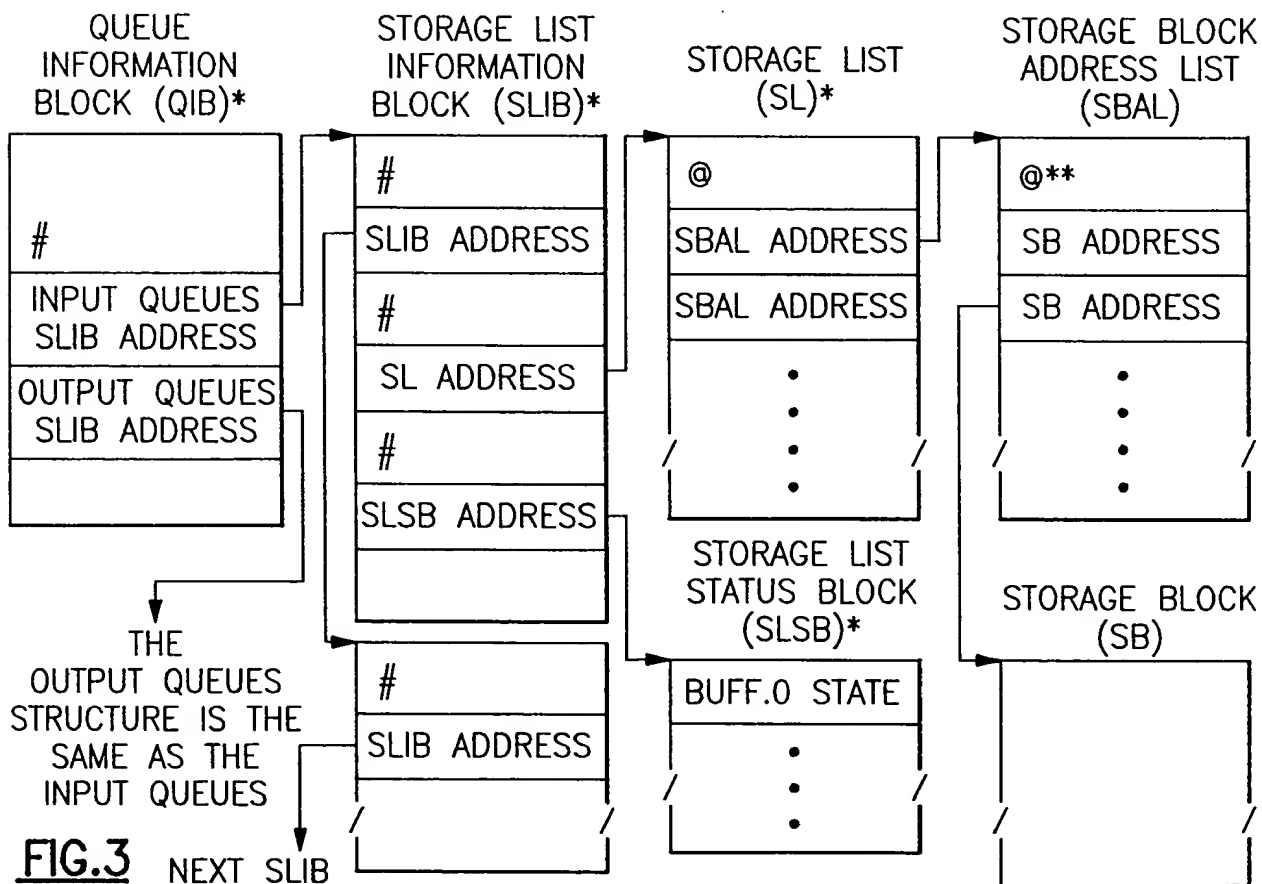
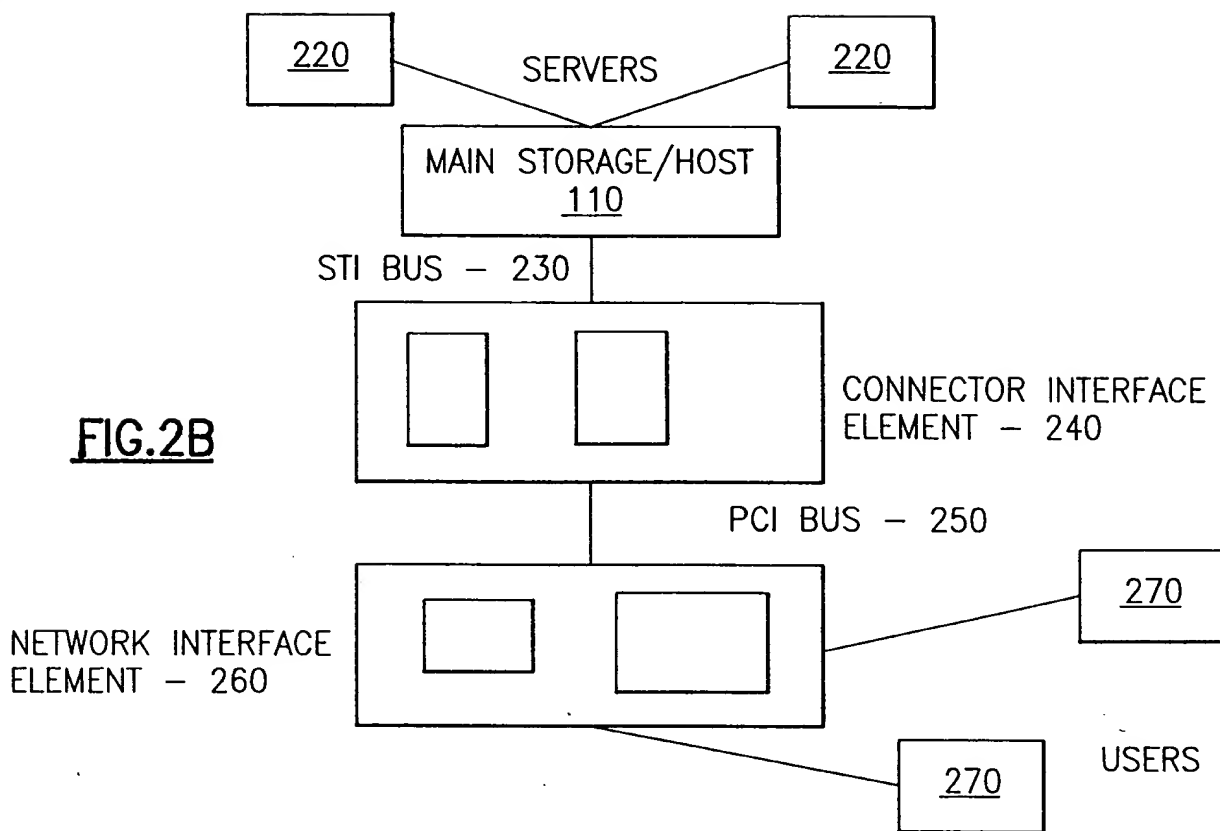
I certify that this document and attached formal drawings are being deposited on November 25, 2002 with the U.S. Postal Service as first class mail under 37 C.F.R. 1.8 and addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

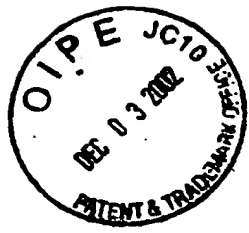
Susan L. Nelson
Signature of Person Mailing Correspondence

Susan L. Nelson

Typed or Printed Name of Person Mailing Correspondence







OFFSET	LENGTH	FUNCTION
0	2	LENGTH
2	1	CATEGORY
3	1	TYPE
4	2	DEV_CUA
6	2	DEV_NO
8	1	PRIORITY SERVICE ORDER
9	1	MAXIMUM SERVICE LIMIT UNITS
10	2	RESERVED
12	4	MAXIMUM SERVICE UNITS PRIORITY 1
16	4	MAXIMUM SERVICE UNITS PRIORITY 2
20	4	MAXIMUM SERVICE UNITS PRIORITY 3
24	4	MAXIMUM SERVICE UNITS PRIORITY 4

NEW DEVICE ADDRESS SETUP SDU FIELD

FIG.4



REQUEST BLOCK THE COMMAND-REQUEST BLOCK FOR STORE-SUBCHANNEL-QDIO DATA HAS THIS FORMAT:

WORD 0	'0010'		'0024'	
1	00000000 00000000		FIRST SCH NUMBER	
2	00000000 00000000		LAST SCH NUMBER	
3	00000000 00000000		00000000 00000000	
	0	16		31

FORMAT OF COMMAND-REQUEST BLOCK FOR STORE-SUBCHANNEL-QDIO DATA.

FIG.5

RESPONSE BLOCK THE COMMAND-RESPONSE BLOCK FOR THE STORE-SUBCHANNEL-QDIO-DATA COMMAND HAS THIS FORMAT:

WORD 0	L2				RESPONSE CODE				
1	C	RSVD.	00000000		00000000		00000000		
2	SUBCHANNEL								
//	QDIO								//
	DESCRIPTION BLOCK								
10	•								
//	•								//
n	•								
	0	1	8	16				31	

FORMAT OF COMMAND-RESPONSE BLOCK FOR STORE-SUBCHANNEL-QDIO DATA.

FIG.6



INPUT QUEUES

CURRENT STATE	ACTIONS	NEW STATE
INPUT BUFFER NOT INITIAL. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: ALLOCATE BUFFER.	INPUT BUFFER EMPTY. BUFFER OWNER: ADAPTER.
INPUT BUFFER EMPTY. BUFFER OWNER: ADAPTER.	BY THE ADAPTER: FILL BUFFER WITH DATA.	INPUT BUFFER PRIMED. BUFFER OWNER: PROGRAM.
INPUT BUFFER EMPTY. BUFFER OWNER: ADAPTER.	BY THE ADAPTER: FILL BUFFER WITH DATA. HALT SIGNAL TERMINATES TRANSFER.	INPUT BUFFER HALTED. BUFFER OWNER: PROGRAM.
INPUT BUFFER EMPTY. BUFFER OWNER: ADAPTER.	BY THE ADAPTER: ERROR DETECTED DURING BUFFER PROCESSING.	INPUT BUFFER ERROR. BUFFER OWNER: PROGRAM.
INPUT BUFFER PRIMED. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: PROCESS BUFFER DATA.	INPUT BUFFER EMPTY. BUFFER OWNER: ADAPTER.
INPUT BUFFER PRIMED. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: PROCESS BUFFER. UNALLOCATE BUFFER.	INPUT BUFFER NOT INITIAL. BUFFER OWNER: PROGRAM.
INPUT BUFFER HALTED. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: APPLICATION DEPENDENT.	NOT APPL.. Q PROCESSING IS TERMINATED BY HSCH
INPUT BUFFER ERROR. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: RECLAIM OR REPLACE BUFFER.	INPUT BUFFER EMPTY. BUFFER OWNER: ADAPTER.

FIG.7

ALLOWED QDIO INPUT QUEUE BUFFER STATE TRANSITIONS.



OUTPUT QUEUES

CURRENT STATE	ACTIONS	NEW STATE
OUTPUT BUFFER NOT INITIAL. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: ALLOCATE AND FILL BUFFER.	OUTPUT BUFFER PRIMED. BUFFER OWNER: ADAPTER.
OUTPUT BUFFER EMPTY. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: FILL BUFFER WITH DATA.	OUTPUT BUFFER PRIMED. BUFFER OWNER: ADAPTER.
OUTPUT BUFFER PRIMED. BUFFER OWNER: ADAPTER.	BY THE ADAPTER: TRANSMIT THE BUFFER DATA.	OUTPUT BUFFER EMPTY. BUFFER OWNER: PROGRAM.
OUTPUT BUFFER PRIMED. BUFFER OWNER: ADAPTER.	BY THE ADAPTER: TRANSMIT THE BUFFER DATA. HALT SIGNAL TERMINATES TRANSFER.	OUTPUT BUFFER HALTED. BUFFER OWNER: PROGRAM.
OUTPUT BUFFER PRIMED. BUFFER OWNER: ADAPTER.	BY THE ADAPTER: ERROR DETECTED DURING BUFFER PROCESSING.	OUTPUT BUFFER ERROR. BUFFER OWNER: PROGRAM.
OUTPUT BUFFER HALTED. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: APPLICATION DEPENDENT.	NOT APPL.. Q PROCESSING IS TERMINATED BY HSCH.
OUTPUT BUFFER ERROR. BUFFER OWNER: PROGRAM.	BY THE PROGRAM: RECLAIM AND REFILL BUFFER WITH DATA.	OUTPUT BUFFER PRIMED. BUFFER OWNER: ADAPTER.

ALLOWED QDIO OUTPUT QUEUE BUFFER STATE
TRANSITIONS.

FIG.8



FIG.9

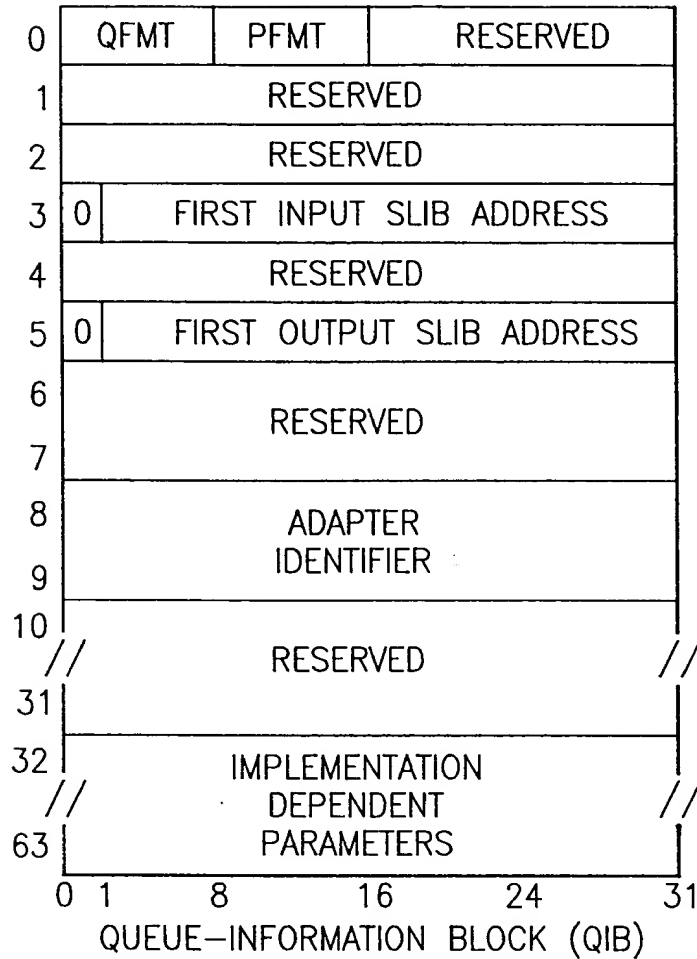


FIG.13

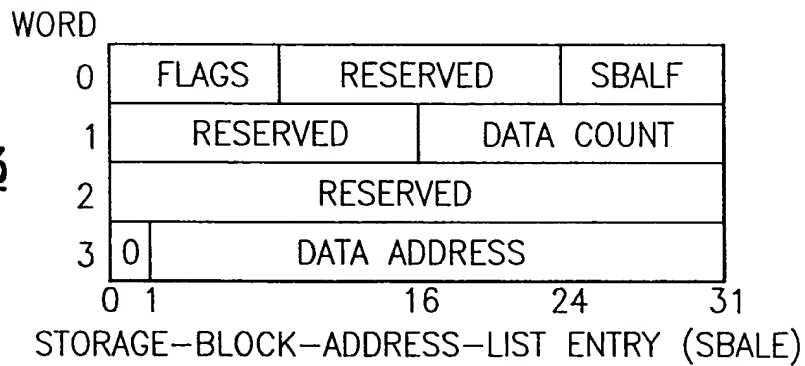
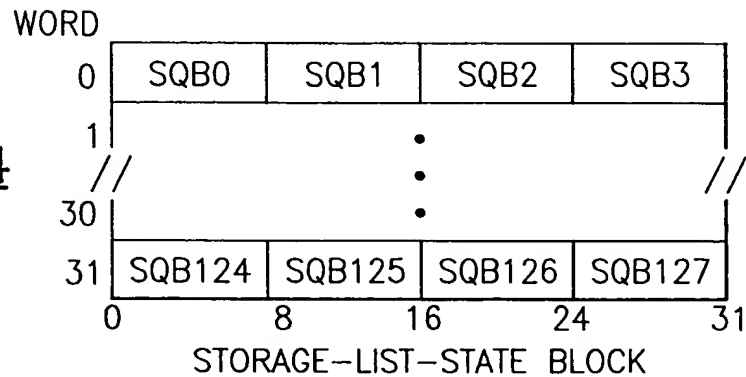


FIG.14



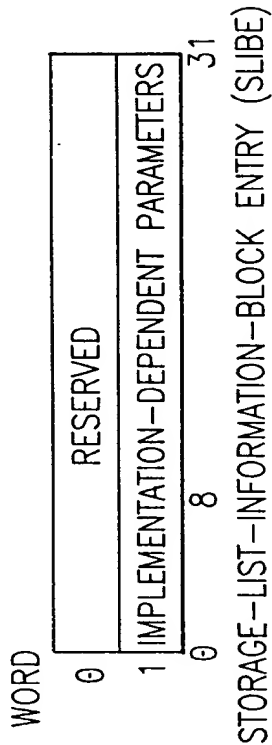
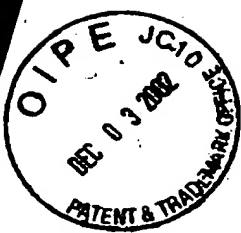


FIG.11

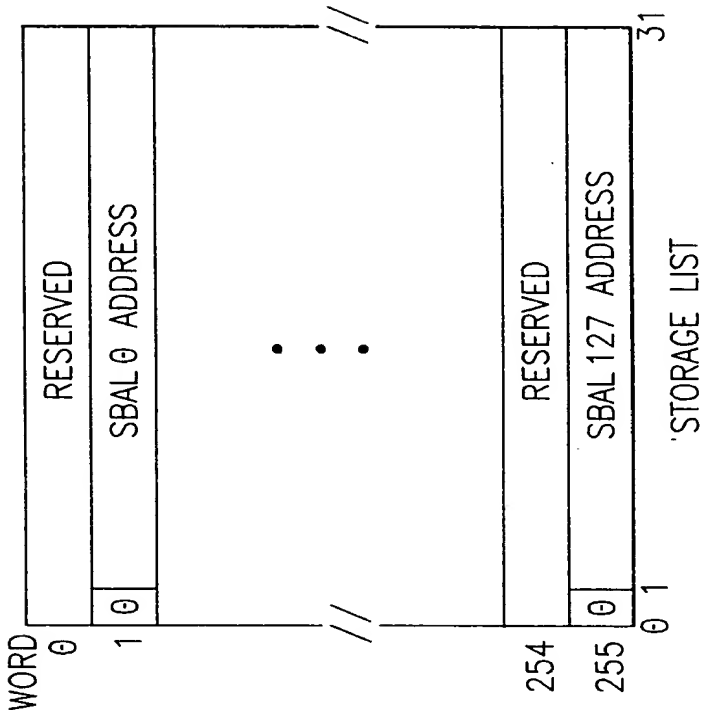


FIG.12

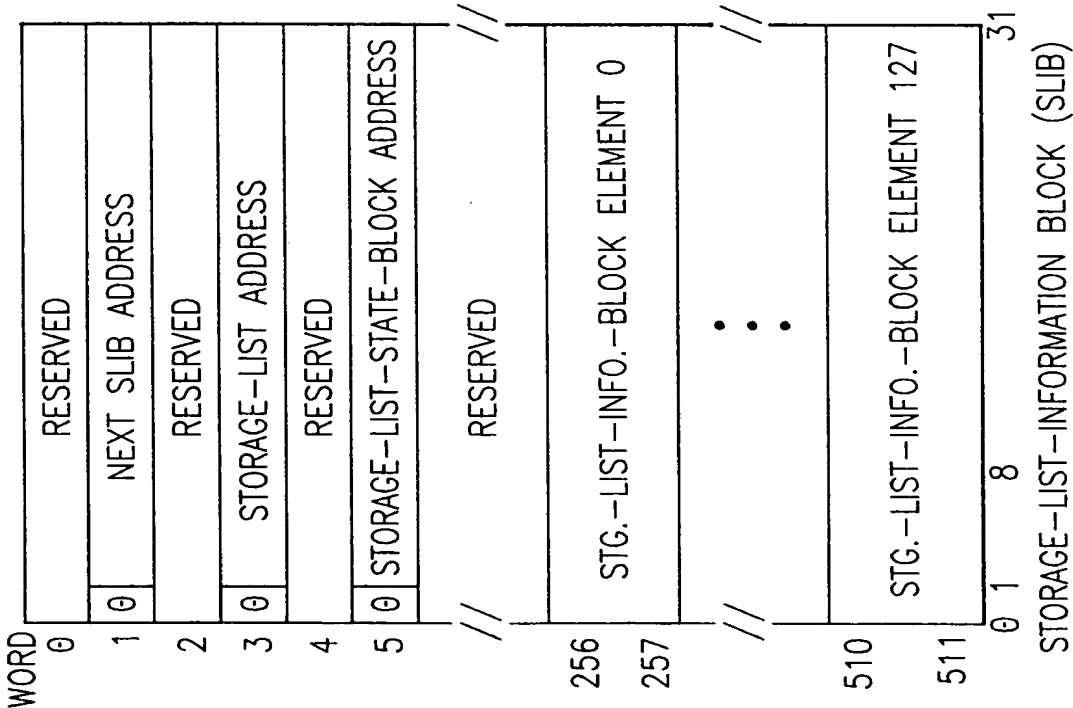


FIG.10